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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,408	09/28/2001	Kazuyoshi Sumiya	01-213	2358

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EXAMINER

YAM, STEPHEN K

ART UNIT PAPER NUMBER

2878

DATE MAILED: 10/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/964,408

Applicant(s)

SUMIYA, KAZUYOSHI

Examiner

Stephen Yam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Objections

1. Claim 2 is objected to because of the following informalities:

In Claim 2, line 4, "concave" should be replaced by "concavity" to obtain grammatical correctness.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claim 2, it is unclear what a "horizontally vertical" direction refers to, as the two terms correspond to two different directions. A clarified term should be substituted. For examination purposes, Examiner interprets "horizontally vertical" as a horizontal or vertical direction.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable by Maruko et al. US Patent No. 4,362,931 in view of Osawa US Patent No. 5,072,105.

Regarding Claims 1 and 3-5, Maruko et al. teach a solar sensor comprising (see Fig. 1) a housing (7), a pair of optical devices (10, 10') disposed in a right side and a left side on a top side of the housing, an optical lens (1') that is disposed above the optical devices and guides incident light towards the optical devices, and a lens member (2) that is disposed between the optical devices and the optical lens, wherein the lens member includes an another optical lens (1' or 5) that guides the incident light to the optical devices. Regarding Claim 3, Maruko et al. teach the another optical lens (1' or 5) comprising a projection disposed above the optical devices to face the optical lens, since the another optical lens contains a convex surface on the top side.

Regarding Claim 4, Maruko et al. teach the other optical lens (5) having a solid structure.

Regarding Claim 5, Maruko et al. teach the other optical lens (1') having a hollow structure.

Maruko et al. do not teach the pair of optical devices disposed of an axis parallel to a direction of travel of a vehicle. Osawa teaches a solar sensor comprising (see Fig. 1a) a housing (42) and a pair of optical devices (29, 30) disposed in a right and left side on a top side of the housing of an axis parallel to a direction of travel (see Fig. 1a and 5) of a vehicle. It would have been obvious to one of ordinary skill in the art at the time the invention was made to set the pair of optical devices in an axis parallel to a direction of travel of a vehicle as taught by Osawa in the solar sensor of Maruko et al., to detect the incident direction, altitude, and intensity of sunlight for an automobile air conditioner as taught by Osawa (see Col. 1, lines 47-53).

Regarding Claim 2, Maruko et al. in view of Osawa teach the invention as taught in Claim 1 in the aforementioned paragraph. Maruko et al. also teach the optical lens being a

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concave lens (see Fig. 1), and the other optical lens disposed in a space defined by the concavity of the optical lens. Maruko et al. do not teach a clearance between the concave and the another optical lens in the direction of travel of a vehicle bigger than another clearance between the concave and the another optical lens in a horizontal or vertical direction to the direction of travel of a vehicle- it is unclear which direction the horizontal or vertical direction refers to, and furthermore, it is design choice as to the layout of the components of the invention. It would have been obvious to one of ordinary skill in the art at the time the invention was made to maintain a clearance between the concave and the another optical lens in the direction of travel of a vehicle bigger than the clearance between the lenses in a horizontal or vertical direction in the solar sensor of Maruko et al. in view of Osawa, to save space and be able to attach the sensor in the smallest possible area to render it inconspicuous inside a vehicle.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maruko in view of Osawa as applied to Claim 3, further in view of Sugiura et al. US Patent No. 5,483,060.

Maruko et al. in view of Osawa teach the invention as taught in Claim 3 in the aforementioned paragraph. Maruko et al. and Osawa do not teach the surface of the lens member facing the optical lens coated with a screen film except on area under the projection. Sugiura et al. teach a solar sensor comprising (see Fig. 4) a housing, a pair of optical devices (26X, 26Y), and a member (24) (see Fig. 1A) above the pair of optical devices containing a projection (24a, 24b) (see Fig. 4), wherein a surface of the member is coated with a screen film (24) except on area under the projection. It would have been obvious to one of ordinary skill in the art at the time the invention was made to coat a surface of the lens member with a screen film except on

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area under the projection in the solar sensor of Maruko et al. in view of Osawa, to shield the optical devices from excessive light and more accurately detect the angle of incident light.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

West US Patent No. 5,957,375, teaches a solar sensor in a vehicle with a housing, a lens, and a pair of optical devices.

Miller US Patent No. 4,367,403, teaches a solar sensor with a housing, a lens, and a pair of optical devices.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Yam whose telephone number is (703)306-3441. The examiner can normally be reached on Monday-Friday 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on (703)308-4852. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-7724 for regular communications and (703)308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

SY 54
September 24, 2002



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